Abstract of the Disclosure

A novel technique for incorporating rapid thermal annealing into media sputter fabrication has facilitated the production of flyable media samples. Discs are fabricated with standard processing techniques to control physical grain size and crystallite texture. A CrMn caplayer ranging in thickness between 0.5 and 5 nm is subsequently deposited to provide the Mn-diffusant necessary to achieve post-treatment exchange de-coupling. While still *in-situ* and before application of protective overcoats, the discs are exposed to temperatures between 200 °C and 350 °C compatible with most media production processes. A threefold increase in coercive force (peak reaching ~3800 Oe) and 10 dB improvement in medium signal-to-noise ratio is observed for the optimized process.